



EQUIPMENT

Operation Manual



Loctite[®] MMD Dispense Valve Manual

Part Number 989027, 1:1 - 5:1 Abrasion Resistant
 989096, 1:1 - 5:1 Stainless Steel
 989098, 5.05:1 – 10:1 Stainless Steel
 989099, 5.05:1 – 10:1 Abrasion Resistant



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1 Please Observe the Following

1.1 Emphasized Sections

Warning!

Refers to safety regulations and requires safety measures that protect the operator or other persons from injury or danger to life.

Caution!

Emphasizes what must be done or avoided so that the unit or other property is not damaged.

Notice:

Gives recommendations for better handling of the unit during operation or adjustment as well as for service activities.

1.2 For Your Safety

WARNING!

Always wear safety glasses when operating the Loctite® MMD Dispense Valve.

WARNING!

Always aim the Loctite® MMD Dispense Valve at the work – never at other people.

WARNING!

100-PSI maximum inlet air pressure. Use a known regulated dry air source only.

WARNING!

Read all material manufacturer's product information. Always follow material manufacturers specific recommendations regarding dispensing even if they may differ from these general instructions.

WARNING!

Although the Loctite® MMD Dispense Valve minimizes user contact with materials, always read and abide by information provided in material manufacturer's MSDS (Material Safety Data Sheet). Keep the MSDS accessible to the work area as it lists valuable emergency information.

WARNING!

Consult local, state and federal laws before disposing of mixers or material.

WARNING!

Do not operate if any of the Loctite® MMD Dispense Valve's components are missing or damaged.

The unit may be repaired only by an authorized Loctite service representative.

2 Description

The pneumatically actuated Loctite® MMD Dispense Valve is designed to isolate materials until they have reached the disposable Static mix nozzle inlet. The "A" and "B" components enter through individual shut off spool valves and pass through the Loctite® MMD Dispense Valve in separate streams. Upon exiting the Loctite® MMD Dispense Valve nose, the "A" and "B" materials converge in the Static mix nozzle and are thoroughly blended prior to reaching the mixer outlet. A wide selection of Static mix nozzles is available to accommodate most materials, ratios, viscosities and flow rates.

The shut off valve rods are operated together for synchronization of the two streams, and when closed, the valve rod spools create a snuff back in the outlet adapter and Static mix nozzle which draws back material at the tip. The degree of snuff back is adjustable and can thus be set to give optimum control of anti-drip and stringing between shots, depending on material viscosity and pressure. Shut-off is positive and the large air cylinder drive gives a snap-action on the open and close sequences.

A reverse acting version of the Loctite® MMD Dispense Valve is also available that does not provide snuff back control.

3 Installation

3.1 Tools Required for Installation and Maintenance

- Snap Ring Pliers .070 Tip
- Standard Allen Wrench Set
- Standard Open End Wrench Set
- Medium Straight Head Screw Driver

3.2 Installation Procedure

1. Turn off the air supply and bleed off existing pressure.
2. Turn off the power source.
3. Disconnect the material feed lines.
4. Take caution to mark the material feed lines for proper "A" to "A" and "B" to "B" connections.
5. Disconnect the air supply lines or remove the fittings.
6. Remove the old Loctite® MMD Dispense Valve mounting if applicable.
7. Install the new Loctite® MMD Dispense Valve.
8. Install the air supply lines. (Dry, Clean Air)
9. Install the material feed lines.
10. Take caution to connect "A" to "A" and "B" to "B".
11. Refer to the operations manual for priming the system.
12. Adjust the Snuff-Back if applicable.
13. Verify the pump's ratio accuracy and shot repeatability.

4 Operation

4.1 Dispensing Material

Operation of the Loctite® MMD Dispense Valve may be accomplished by one of several methods using an open/close limit switch.

- Lever Actuated
- Hand Held Trigger Actuated
- Foot Switch Actuated
- Control Panel Actuated



Loctite® MMD Dispense Valve with Optional Hand Held Trigger Assembly



Loctite® MMD Dispense Valve with Optional Counter Balance and Lever Actuator Assembly

4.2 Shut Down

Proper shut down is important to the continued trouble-free operation of the Loctite® MMD Dispense Valve.


1. Remove the Static mix nozzle and discard.
2. Wipe the excess material from the outlet block.
3. Ensure there has been no cross-contamination on the outlet block and dispense a purge shot.
4. Install the white plug and retaining nut onto the outlet block when not in use.

5 Troubleshooting

TROUBLESHOOTING		
Problem	Cause	Solution
No Flow	Air Pressure too Low Clogged Mixer Dispense Valve (DV) Switch Closed	Requires 80 PSI Inlet Pressure Replace the Mixer Reset to Auto
Leaks	Seals not Seated Seals Damaged Worn Spool Rods	Check the Seals Replace the Seals Replace Spool Rods and Seals
Drools	Air Trapped Snuff-Back out of Adjustment	Review Start-up Procedure for Priming Re-adjust the Snuff-Back (If Applicable)
Off Ratio	Metering Pumps/System	Check Priming, Check-Valves, and/or Pistons
Not Mixing	Fouled Mixer Out of Phase Condition A:B	Replace the Mixer Check the Phasing at the Pumps

6 Care and Maintenance

Routine maintenance is important to the continued function of the Loctite® MMD Dispense Valve. If maintenance is delayed or omitted, the Loctite® MMD Dispense Valve may not operate properly.

 If Loctite® MMD Dispense Valve contains grease fittings use approved grease, grease monthly. Grease should exit from outlet ports on injection block. Do not over grease.

6.1 Routine Maintenance

- Replace the Static mix nozzle as required.
- Replace seals and o-rings if the valve is leaking.
- Use Krytox® 203GPL lubricant on the seals and o-rings.
- Replace the spool rods as required.
- Use Krytox® 203GPL lubricant on the spool rods.
- Use Krytox® 203GPL lubricant on the air cylinder bore.

7 Troubleshooting

TROUBLESHOOTING		
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8 Recommended Spare Parts

RECOMMENDED SPARE PARTS		
Quantity	Part Name	Part Number
1	Valve Seal Replacement Kit	98523 – See detail below*
2	O-Ring for SAE Elbow Fitting	AF95/0972/87
2	Valve Spool Rods (Stainless Steel Application)	AF01/1662/98
2	Valve Spool Rods (Valve Application)	AF01/1662/99N
1	Plastic Retaining Nut	98540
1	Ratio Check Tip (10:1 Loctite® MMD Dispense Valve)	98537
1	White Plug (10:1 Loctite® MMD Dispense Valve)	98539
1	Ratio Check Tip (1:1 Loctite® MMD Dispense Valve)	98536
1	White Plug (1:1 Loctite® MMD Dispense Valve)	98538
10	Mixers - Size Determined by Application	-
1	Mixer Shroud - Size Determined by Application	-
1	Krytox® lubricant 203GPL (3 Gram Pack)	AF84/0200-K3/11
1	Snap Ring	AF96/0836/99
1	Snap Ring Pliers (.070 Tip)	Sears P/N 9-45490 with a .070 Tip
1	E-Clip	AF96/0524/99
1	Bearing Replacement Tool	AF01/1666-T/70

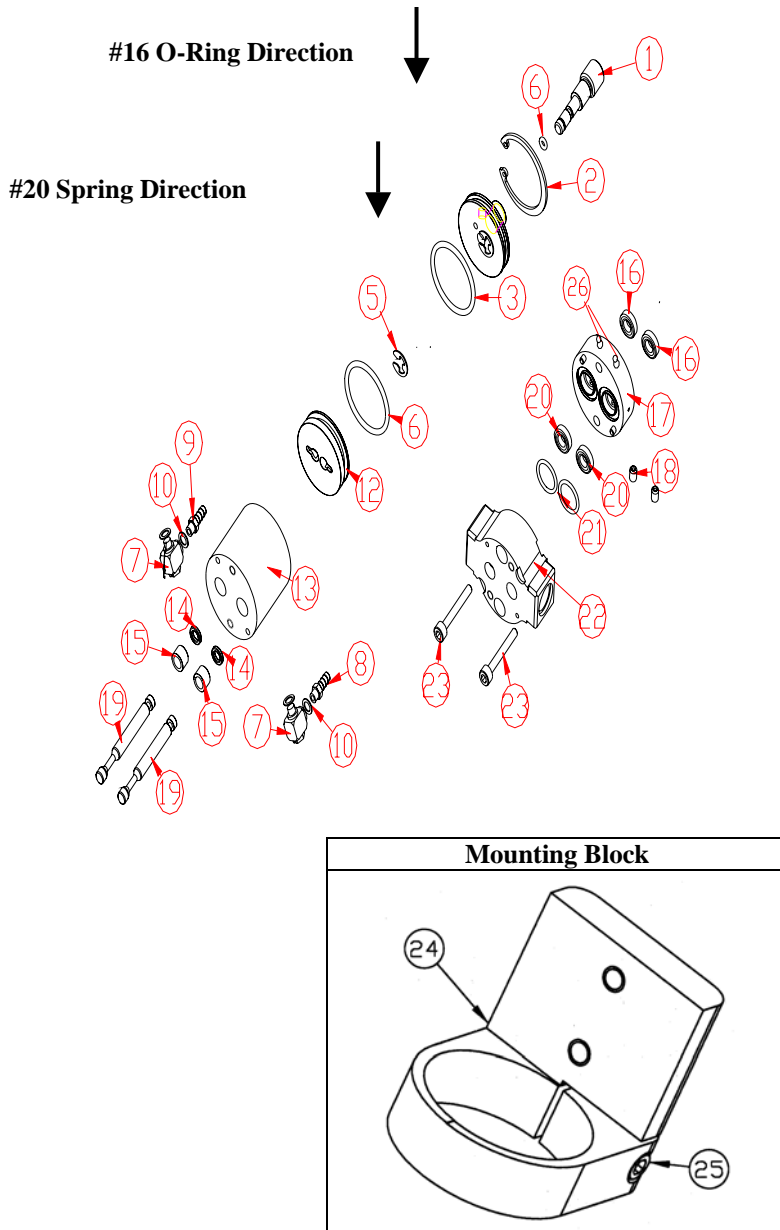
8 Recommended Spare Parts (Cont'd)

OPTIONAL EQUIPMENT	
Part Name	Part Number
Actuator Assembly, Loctite® MMD Dispense Valve Lever - Short (Electric)	989026
Actuator Assembly, Loctite® MMD Dispense Valve Lever - Short (Pneumatic)	989354
Actuator Assembly, Loctite® MMD Dispense Valve Lever - Long (Electric)	989356
Actuator Assembly, Loctite® MMD Dispense Valve Lever - Long (Pneumatic)	989355
Actuator Assembly, Loctite® MMD Dispense Valve Hand Held Trigger (Electric)	989353
Actuator Assembly, Loctite® MMD Dispense Valve Hand Held Trigger (Pneumatic)	989025
Counter Balance 5# Spring, 8' Cable	AF84/0172/11

98523	Valve Seal Replacement Kit	Quantity
AF95/0850/11	Posipak Seal	2
AF95/0985/92Z	Posipak Seal	4
AF95/0261/01	O-ring –Buna	1
AF95/0902/87	O-ring TES	6
AF95/0126/01	O-ring –Buna	1
AF95/0007/01	O-ring Buna	1
AF95/0260/01	O-ring –NIT	2
AF94/0740-G/01	Gasket	2
AF84/0200-K3/11	Lubricant –3 gram -Krytox®	1

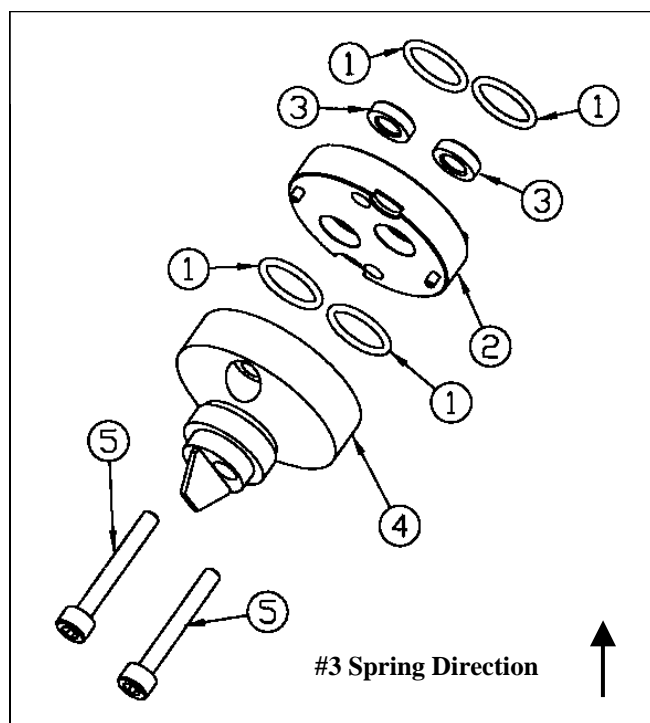
9 Exploded Diagram

Loctite® MMD Dispense Valve - Main Body View



Sym	Qty	Part No.	Description
1	1	AF01/1663-1/97	Knob, Stroke
2	1	AF96/0836/99	Ring, Retaining
3**	1	AF95/0126/01	O-Ring, Buna
4	1	AF01/1664-1/97	Cap, Top
5	1	AF96/0524/99	ECLIP
6**	1	AF95/0007/01	O-Ring, Buna
7	1	AF82/0171/99	Elbow, Adjust
8	1	AF94/0740/99	Nipple, Barb
9	1	AF94/0740/99	Nipple, Barb
10**	2	AF94/0740-G/01	Gasket
11**	1	AF95/0261/01	O-Ring, Buna
12	1	AF01/1661/97	Piston
13	1	AF01/1660/97	Block, Cyl, Top
14**	2	AF95/0260/01	O-Ring, NIT
15	2	AF01/1666/11	Bearing, Shaft
16**	2	AF95/0850/11	Posipak, Seal
17	1	AF01/1667/98	Block, Injection
18	2	AF96/0117/98	Screw, Set
19 *	2	AF01/1662/98	Rod SS Rod Abrasion resistant
19 *		AF01/1662/99N	
20**	2	AF95/0985/92Z	Posipak, Seal
21**	2	AF95/0902/87	O-Ring, TES
22	1	AF01/1668/98	Block, Inlet
23	2	AF96/0834/99	Screw, SHC
24	1	AF01/1673/97	Block, Mounting
25	1	AF96/0834/99	Screw, SHC
26	2	AF82/0703-F/11	Grease Fitting

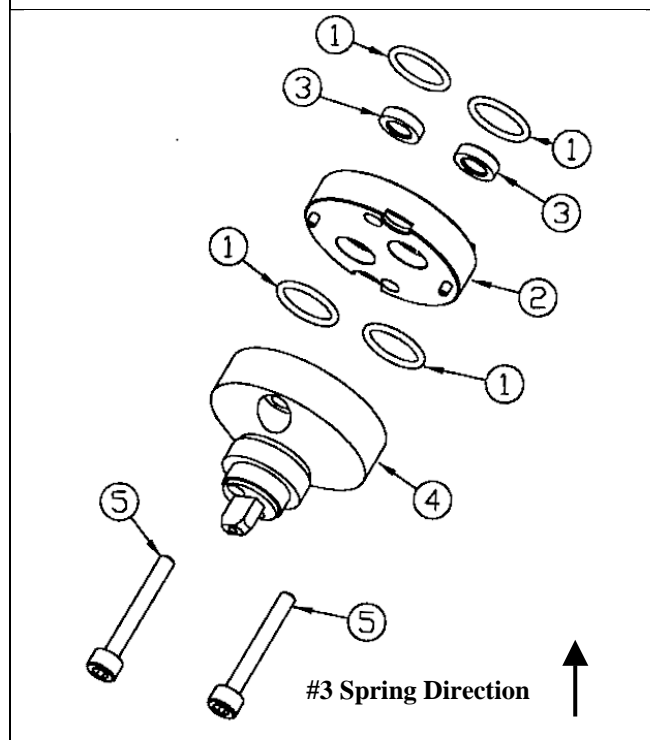
- The main body and mounting block is common to all configurations, except item (19), which is abrasion resistant – 989027 or stainless steel – 989096
- The springs and o-rings in the seals should be in the direction of the material flow and toward the mixer.
- When changing Shaft Bearings item (15) it is recommended that the Bearing Replacement Tool (part number AF01/1666-T/70) be used. This tool is inserted into the bearing and then the bearing pushed into the Cylinder Block. The tool ensures the integrity of the bearing inside diameter. Bearings installed without this tool may deform and cause malfunction of the spools.
- ** These items are included in Valve Seal Replacement Kit – 98523



Loctite® MMD Dispense Valve 1:1 - 5:1
989096* & 989027*
Snuff-back capability

Sym	Qty	Part No.	Description
1	4	AF95/0902/87	O-Ring, TES
2	1	AF01/1669/98	Block, Seal
3	2	AF95/0985/92Z	Packing, Seal
4	1	AF01/1671/98	Block, Outlet
5	2	AF96/0834/99	Screw, SHC

- The springs in the seals should be pointed against the material flow or away from the mixer.
- * 989096 Stainless steel rods.
- * 989027 Abrasion resistant rods



Loctite® MMD Dispense Valve 5.05:1 - 10:1
989098 & 989099
Snuff-back capability

Sym	Qty	Part No.	Description
1	4	AF95/0902/87	O-Ring, TES
2	1	AF01/1669/98	Block, Seal
3	2	AF95/0985/92Z	Packing, Seal
4	1	AF01/1674/98	Block, Outlet
5	2	AF96/0834/99	Screw, SHC

- The springs in the seals should be pointed against the material flow or away from the mixer.
- * 989098 Stainless steel rods.
- * 989099 Abrasion resistant rods

10 Warranty

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